Vijay Rajagopal

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EDUCATION

The University of Tennessee | Knoxville, TN   **Aug 2021 – December 2022**
Masters Studies in Computer Science (5 Year BS/MS Program)   Overall GPA: 3.90/4.00

The University of Tennessee | Knoxville, TN   **Aug 2017 – May 2021**
Bachelor of Science in Computer Science (Honors) w/ Cybersecurity Minor   Overall GPA: 3.68/4.00

EXPERIENCE

Computer Vision Engineer   **Jan 2023 – Present**
Georgia Pacific | Samuel Coyne   Atlanta, GA

- Developed real-time edge-based collision avoidance system for automated and manual industrial vehicles
- Produced efficient bed line monitoring system, which assisted in preventing 3 potential site accidents
- Trained and optimized image segmentation networks that helped prevent 100+ product-related shutdowns
- Improved object detection model accuracy for internal safety surveillance system by 10%
- Accelerated multiple object detection and segmentation networks by 2-10x with GPU-based toolkits
- Collaborated with multidisciplinary teams of 10 or more engineers, process control managers, and business leaders to create effective solutions

Graduate Research Assistant for Computer Vision and Image Processing   **Aug 2021 – Dec 2022**
The University of Tennessee | Dr. Mongi A. Abidi   Knoxville, TN

- Optimized neural networks to run at 15-30 FPS on low-power devices (Jetson AGX, Jetson NX, and FPGAs)
- Published multiple papers based on research utilizing multi-modal data (optical imaging and RADAR data)
- Miniaturized and accelerated neural networks by 2-5x with popular DL toolkits (TensorRT, TF-Lite, SparisfyML)
- Collaborated with diverse range of laboratories to create a commercially-viable product
- Modified 10+ state-of-the-art neural networks for object detection and multi-object tracking applications
- Assessed methods to increase neural network robustness against data in unideal environments

Undergraduate Research Assistant for Deep Learning and Image Processing   **Jun 2018 – Aug 2021**
The University of Tennessee | Dr. Mongi A. Abidi   Knoxville, TN

- Conducted performance analysis on over 5 different FPGA-capable neural networks
- Tested and modified facial detection neural networks for real-time large crowd detection
- Developed program that analyzes network performance against degraded and corrected images

International Paper IT Intern Specialist   **Jun 2020 - Aug 2020**
International Paper | Scott Walsh   Memphis, TN

- Improved setup of Azure instances by scripting and documenting network security and traffic policies
- Redesigned SharePoint website for IP's Cloud Readiness Program with HTML, ASPX, and Javascript
- Presented concept dashboard created with Express.js, Angular, and MongoDB for IP's Virtual Innovation Forum

PUBLICATIONS

- Vijaysrinivas Rajagopal, Abdel-Kareem Moadi (2023). *Portable Real-Time System for Multi-Subject Localization and Vital Sign Estimation*. IEEE Radio and Wireless Symposium
- Vijaysrinivas Rajagopal. (2022). *Benchmarking of Embedded Object Detection in Optical and RADAR Scenes*. Knoxville: University of Tennessee

TECHNICAL SKILLS

- **Programming:** Python (PyTorch, Tensorflow), Javascript, C++, C, Objective-C, Typescript, PHP, SQL
- **Other Tools:** Raspberry Pi, Azure, AWS, Blender 3D, Kali Linux